4.8 AIR QUALITY

4.8.1 EXISTING ENVIRONMENTAL SETTING

Regional Air Quality

The project site is located in central Los Angeles County in the City of Burbank, an area within the South Coast Air Basin (Basin), which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. Air quality conditions in the Basin are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD), a regional agency that regulates stationary sources of pollution throughout the Basin. In addition, the SCAQMD has authority under the California Clean Air Act (CCAA) to manage transportation activities at indirect sources. Indirect sources are facilities that do not have equipment that directly emits substantial amounts of pollution, but that attract large numbers of mobile sources of pollution. Direct emissions from motor vehicles are regulated by the California Air Resources Board (ARB).

Both the State and federal governments have established health based Ambient Air Quality Standards (AAQS) for six air pollutants: carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, lead, and suspended particulate matter. The Basin does not attain State and federal AAQS for four of the six criteria air pollutants. The Basin is in compliance with federal sulfur dioxide and lead standards; however, the Basin is a nonattaiment area for ambient carbon monoxide, ozone, and particulate levels (PM_{10}). In addition, the Basin has been the only area in the country that does not attain the federal nitrogen dioxide standard. However, because nitrogen dioxide levels have met the federal standard within the past few years, the SCAQMD is in the process of requesting redesignation. The State AAQS are more stringent than the federal AAQS and, therefore, are exceeded by the same criteria pollutants by an even higher margin.

Therefore, projects that may have significant emissions of these criteria pollutants will delay the air quality attainment goals of the region.

Climate/Meteorology

The Basin climate is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the Basin. The region lies in the semipermanent high pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, periods of extremely hot weather, winter storms, or Santa Ana wind conditions do exist.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the site that

monitors temperature is the Burbank Valley Pump Place (Burbank) station.[1] The Burbank station monitored monthly average temperatures ranging from 54.5EF in December to 77.7EF in September, 1999.

The majority of annual rainfall in the Basin occurs between October and March. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The climatological station nearest to the site that monitors precipitation is the Burbank station. Rainfall measured in the Burbank area in 1997 varied from 4.89 inches in January to 0.45 inch or less between February and October. Moreover, monthly and yearly rainfall totals are extremely variable.

Even though the Basin has a semi-arid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore 8 to 12 mile per hour (mph) daytime breeze and an offshore 3 to 5 mph nighttime breeze. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly Santa Ana winds from the mountains and deserts northeast of the Basin. Summer wind flow patterns represent worst case conditions, as this is the period of higher temperatures and more sunlight, which results in ozone formation.

During spring and early summer, pollution produced during any one day is typically blown out of the Basin through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. Air contaminants can be transported 60 miles or more from the Basin by ocean air during the afternoons. From early fall to winter, the transport is less pronounced because of slower average wind speed and the appearance of drainage winds earlier in the day. During stagnant wind conditions, offshore drainage winds may begin by late afternoon. Pollutants remaining in the Basin are trapped and begin to accumulate during the night and the following morning. A low morning wind speed in pollutant source areas is an important indicator of air stagnation and the build-up potential for primary air contaminants.

With persistent low inversions and cool coastal air, morning fog and low stratus clouds are common. Sunshine is recorded in central Los Angeles area on more than 70 percent of days per year. This is an extremely important climatological factor, considering the role of sunshine in the photochemical smog production process. Cloudy days are less likely in the eastern portions of the Basin and about 25 percent greater along the coast.

The vertical dispersion of air pollutants in the Basin is limited by temperature inversions in the atmosphere close to the earth's surface. Temperature normally decreases with altitude, and a reversal of this atmospheric state, where temperature increases with altitude, is called an inversion. The height from the earth to the inversion base is known as the mixing height.

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[1] California Climatological Data Annual Summary, 1993; National Oceanic and Atmospheric Administration.

Inversions are generally lower in the nighttime, when the ground is cool, than during daylight hours, when the sun warms the ground and, in turn, the surface air layer. As this heating process continues, the temperature of the surface air layer approaches the temperature of the inversion base, causing heating along its lower edge. If enough warming takes place, the inversion layer becomes weak and opens up to allow the surface air layers to mix upward. This can be seen in the middle to late afternoon on a hot summer day when the smog appears to clear up suddenly. Winter inversions typically break earlier in the day, preventing excessive contaminant build-up.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants are generated in urbanized areas. In the winter, the greatest pollution problems are carbon monoxide and oxides of nitrogen because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

Air Pollution Constituents

Both the State of California and the federal government have established health based AAQS for six air pollutants. As shown in Table 4.8.A, these pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM_{10}), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to primary and secondary AAQS, the State of California has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide and particulate matter (see Table 4.8.A). These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three.

Ozone

Ozone (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases, rather than being directly emitted. Ozone is a pungent, colorless gas typical of Southern California smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors, such as the sick, elderly, and young children. Ozone levels peak during the summer and early fall months.

Pollutant	Averaging Time	STATE	FEDERAL	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm (180 $\mu g/m^3$)	–	Same as Primary Std.
	8 Hour	–	0.08 ppm	
Nitrogen Dioxide	Annual Average	–	0.053 ppm (100 $\mu g/m^3$)	Same as Primary Std.
	1 Hour	0.25 ppm (470 $\mu g/m^3$)	–	
Carbon Monoxide	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
Suspended Particulate Matter (PM_{10})	Annual Geometric Mean	30 $\mu g/m^3$	–	
	24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$	Same as Primary Std.
	Annual Arithmetic Mean	–	50 $\mu g/m^3$	
Suspended Particulate Matter ($PM_{2.5}$)	24 Hour	–	65 $\mu g/m^3$	Same as Primary Std.
	Annual Average	–	65 $\mu g/m^3$	
Sulfur Dioxide	Annual Average	–	80 $\mu g/m^3$ (0.03 ppm)	–
	24 Hour	0.04 ppm (105 $\mu g/m^3$)	365 $\mu g/m^3$ (0.14 ppm)	–
	3 Hour	–	–	1300 $\mu g/m^3$ (0.5 ppm)
	1 Hour	0.25 ppm (655 $\mu g/m^3$)	–	–
Lead	30 Day Average	1.5 $\mu g/m^3$	–	–
	Calendar Quarter	–	1.5 $\mu g/m^3$	Same as Primary Std.
Sulfates	24 Hour	25 $\mu g/m^3$	–	–
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	–	–
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm (26 $\mu g/m^3$)	–	–
Visibility Reducing Particles	8 Hour (10 am to 6 pm, PST)	**	–	–

** In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent. Measurement in accordance with ARB Method V.

Source:
CARB Fact Sheet 39, 1992.

1/22/98(BUR730)

Table 4.8.A

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Ambient Air Quality Standards

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas, and can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

Nitrogen Oxides

Nitrogen oxides contribute to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. Nitrogen dioxide (NO_2), a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_x. NO_x is a primary component of the photochemical smog reaction. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the Basin. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Reactive Organic Compounds

Reactive Organic Compounds (ROC) are formed from combustion of fuels and evaporation of organic solvents. ROC is a prime component of the photochemical smog reaction. Consequently, ROC accumulates in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower.

Particulate Matter

Particulate matter (PM_{10}) refers to small suspended particulate matter with an aerodynamic diameter of 10 microns or less that is not readily filtered out by the lungs. Nitrates and sulfates, as well as dust particulates, are major components of PM_{10}. These small particles can be directly emitted into the atmosphere as by-products of fuel combustion, through abrasion, such as tire or brake lining wear, or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces, and can enter the human body through the lungs.

Local Air Quality

The site is located within SCAQMD jurisdiction. The SCAQMD maintains ambient air quality monitoring stations throughout the Basin, as shown in Figure 4.8.1.

The East San Fernando Valley (formerly Burbank) air monitoring station monitors all five criteria pollutants: carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, and suspended particulates.[1]

Air quality trends identified from data collected at the East San Fernando Valley air quality monitoring station between 1993 and 1997 are discussed below. From the ambient air quality data (Table 4.8.B), it can be seen that nitrogen dioxide levels are below the relevant State and federal standards. Carbon monoxide has exceeded State and federal eight hour standards in two to three of the past five years, but the one hour CO standards have not been exceeded in all five years. Ozone levels exceeded the State and federal standard in each of the past five years. Ozone exceeded the State one hour standard from 15 to 58 days a year during the last five years and exceeded the federal one hour standard from 2 to 20 days a year. The PM_{10} level in the project area exceeded the State standards in each of the past five years, but has not exceeded the federal standards since 1993. PM_{10} levels exceeded the State standard from 11 to 21 days a year in the past five years.

Regional Air Quality Planning Efforts

The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The Federal Clean Air Act Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in non-attainment areas of the state. This requirement led to the local air quality planning processes in areas like the South Coast Air Basin.

The ARB oversees activities of local air quality management agencies and is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for federal Environmental Protection Agency (EPA) approval. ARB maintains air quality monitoring stations throughout the State in conjunction with local air districts. Data collected at these stations are used by the ARB to classify air basins as "attainment" or "non-attainment" with respect to each pollutant and to monitor progress in attaining air quality standards.

The SCAQMD and Southern California Association of Governments (SCAG) are responsible for formulating and implementing the Air Quality Management Plan

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[1] Air Quality Tables, 1993, 1994, 1995, 1996, 1997; South Coast Air Quality Management District.

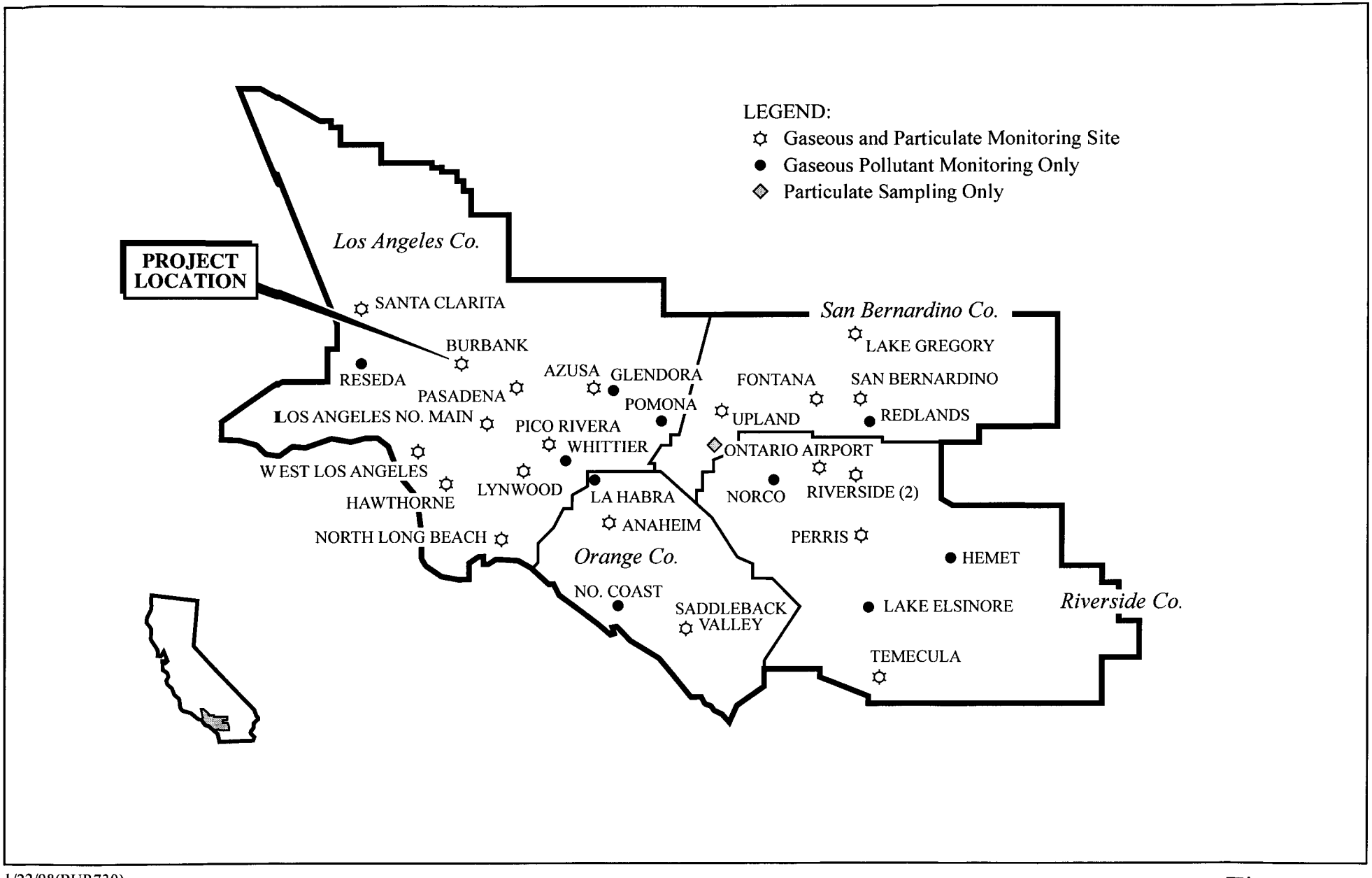

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Figure 4.8.1

LSA

SCAQMD Air Monitoring Network within the South Coast Air Basin

Table 4.8.B - Ambient Air Quality East San Fernando Air Monitoring Station

	Carbon Monoxide				Ozone		Fine Suspended Particulates		Nitrogen Dioxide	
	Max. 1 Hour Conc. (PPM)	**Number of Days Exceeded**	**Max. 8 Hour Conc. (PPM)**	**Number of Days Exceeded**	**Max. 1 Hour Conc. (PPM)**	**Number of Days Exceeded**	**Max. 24 Hour Conc. (Ug/m^3)**	**Number of Days Exceeded**	**Max. 1 Hour Conc. (PPM)**	**Number of Days Exceeded**
State Stds.	> 20 ppm/1 hr		$ 9.1 ppm/8 hr		> .09 ppm/1 hr		> 50 ug/m^3, 24 hrs		> .25 ppm/1 hr	
1997	9.0	0	7.5	0	.13	15	92	17	.20	0
1996	12.0[1]	0	9.4[1]	1	.14	31	110	15	.20[1]	0
1995	13.0	0	12.0	6	.17	58	135	15	.18	0
1994	13.0	0	10.7	6	.17	56	114	11	.18	0
1993	12.0	0	8.4	0	.18	45	93	21	.17	0
MAXIMUM	**13.0**		**12.0**		**.18**		**135**		**.20**	
Federal Stds.	> 35 ppm/1 hr		$ 9.5 ppm/8 hr		> .12 ppm/1 hr		> 150 ug/m^3, 24 hrs		0.053 ppm, annual average	
1997	9.0	0	7.5	0	.13	2	92	0	0.0430	0
1996	12.0[1]	0	9.4[1]	0	.14	6	110	0	0.0490[1]	0
1995	13.0	0	12.0	4	.17	20	135	0	0.0454	0
1994	13.0	0	10.7	5	.17	18	114	0	0.0497	0
1993	12.0	0	8.4	0	.18	16	93	0	0.0440	0
MAXIMUM	**13.0**		**12.0**		**.18**		**135**		**0.0497**	

NA = Not Available
Source: SCAQMD Air Quality Data, 1993 to 1997.

[1] Less than 12 months of data; may not be representative.

(AQMP) for the Basin. Regional AQMPs were adopted for the Basin for 1979, 1982, 1991, 1994, and 1997. The SCAQMD Governing Board adopted the 1997 AQMP on November 15, 1996. The Plan was adopted by ARB on January 23, 1997, and was sent to the EPA for approval in February, 1997. In January, 1999, the EPA rejected the provisions of the 1997 AQMP designed to attain the federal ozone standard for the region. The 1997 AQMP provisions related to CO and NO_2 were approved, but the provisions related to PM_{10} have not been approved. Because the 1997 AQMP was approved by SCAQMD and ARB for consistency analysis, it is used to determine project consistency for CEQA consistency determination.

4.8.2 THRESHOLD OF SIGNIFICANCE CRITERIA

At the present time, the threshold criteria suggested by SCAQMD for determining the significance of project air quality impacts have not been adopted as the regulatory standards for the City of Burbank. Rather, the threshold criteria are planning tools and suggested thresholds for use by local Lead Agencies in making determinations regarding the significance of project air quality impacts. In this case, the City has decided to use the threshold criteria to gauge the significance of air quality emissions associated with the Development Options A, D1-A, D1-B, and D1-C for purposes of this EIR. However, because of the need to consider the project's consistency with the AQMP, the air quality impact analysis also considers the potential long-term air quality impacts of the project based upon assumptions and criteria set forth in the AQMP.

Thresholds for Diesel Emissions

The ARB has identified certain components of diesel exhausts to be carcinogens, but not the entire diesel exhausts. Because the primary uses on the site are retail, office, hotel, and potentially vehicle sales, there is no use that is dependent on diesel use or promotes diesel use. Air emission modeling used in the balance of this analysis includes all vehicle trips, including diesel truck trips related to deliveries, in the trip generation used as a basis for the air emissions calculations. In addition, no thresholds have been established for diesel emissions for development projects such as the proposed project. Therefore, specific modeling of diesel emissions has not been performed for this EIR.

Thresholds for Construction Emissions

The following significance thresholds for construction emissions have been established by the SCAQMD:

- 2.5 tons per quarter or 75 pounds per day of ROC
- 2.5 tons per quarter or 100 pounds per day of NO_x
- 24.75 tons per quarter or 550 pounds per day of CO
- 6.75 tons per quarter or 150 pounds per day of PM_{10}
- 6.75 tons per quarter or 150 pounds per day of SO_x

Projects in the Basin with construction related emissions that exceed any of the emissions thresholds above are considered significant by the SCAQMD.

Thresholds for Operational Emissions

Specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in the SCAQMD's *CEQA Air Quality Handbook*. The criteria include emissions thresholds, compliance with State and national air quality standards, and conformity with the existing SIP or consistency with the current AQMP. The daily operational emissions "significance" thresholds are as follows.

Regional Emissions Thresholds

- 55 pounds per day of ROC
- 55 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of PM_{10}
- 150 pounds per day of SO_x

Projects in the Basin with operation related emissions that exceed any of the emission thresholds are considered significant by the SCAQMD.

Ambient Air Quality Standards

- California State one hour CO standard of 20.0 ppm
- California State eight hour CO standard of 9.0 ppm

The significance of localized project impacts depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. The SCAQMD has indicated in its CEQA Air Quality Handbook that if ambient levels are below the standards, a project is considered to have significant impacts if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase one hour CO concentrations by 1.0 ppm or more or eight hour CO concentrations by 0.45 ppm or more.

The potential air quality impacts of Development Options A, D1-A, D1-B, and D1-C were assessed using guidelines developed by the SCAQMD *CEQA Air Quality Handbook* and the CALINE4 CO hot spot analysis model. This model is designed to identify localized concentrations of CO, often termed "hot spots." A brief discussion of input to the CALINE4 model is provided in Appendix J1.

4.8.3 IMPACTS - DEVELOPMENT OPTION A

Methodology

The air quality assessment for Development Option A included estimating emissions associated with short-term construction and long-term operation of Development Option A. Regional air quality impacts include stationary (direct) and mobile (indirect) emissions associated with Development Option A. Long-term stationary emissions include electric and natural gas usage. Long-term mobile emissions include vehicle trips associated with Development Option A. In addition, localized air quality impacts, i.e., higher carbon monoxide concentrations (CO hot spot) near intersections or roadway segments, associated with Development Option A would potentially occur due to project related vehicle trips. The impact analysis contained in this section was prepared in accordance with the methodologies provided by the SCAQMD in its *CEQA Air Quality Handbook*.

Less Than Significant Impacts

Long-Term Microscale Projections

Vehicular trips associated with Development Option A project would contribute to the congestion at intersections and along roadway segments in the project vicinity. As indicated in Section 4.7, Traffic and Circulation, Development Option A would generate a total of 68,660 daily vehicular trips from the project site.

The primary mobile source pollutant of local concern is CO. CO is a direct function of vehicle idling time and, thus, traffic flow conditions. CO disperses rapidly with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations proximate to a congested roadway or intersection may reach unhealthful levels affecting local sensitive receptors (residents, school children, the elderly, hospital patients, etc.). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentration, modeling of CO concentrations is recommended in determining a project's effect on local CO levels.

Existing CO concentrations in the immediate project vicinity are not available because they are not monitored. However, ambient CO levels monitored at the East San Fernando Station (the nearest monitoring station) are generally moderate, with the highest recorded one hour concentration of 13 ppm (State standard is 20 ppm) and eight hour concentration of 12.0 ppm (State standard is 9 ppm) during the past five years (highest in 1995, see Table 4.8.B).

Because the highest CO concentrations occur during peak traffic hours, CO impacts calculated under peak traffic conditions represent a worst case analysis. Modeling of the CO hot spot analysis was based on traffic volumes provided in Section 4.7, which identified the projected future traffic conditions, at afternoon peak hour traffic levels, generated in the project area with and without Development Option A. CO concentrations were calculated for the one hour averaging period and then compared to the State one hour CO standard of 20 ppm. CO eight hour averages were extrapolated from the 1-hour CO calculations, using techniques outlined in the Air Quality Technical Analysis Notes (California Department of Transportation, 1988). Concentrations are given in parts per million (ppm) at each receptor location.

The impact on local CO levels was assessed with the ARB approved CALINE4 air quality model, which allows microscale CO concentrations to be estimated along roadway corridors or near intersections.

Data in Table 4.8.C show the results of CO concentration analysis for operations associated with Development Option A. The data show that there would be no exceedance of either the State or federal CO standards for the one hour or the eight hour durations. The one hour CO concentration near all 14 intersections analyzed ranges from 8.8 to 12.2 ppm, much lower than the 20 ppm State standard and the 35 ppm federal standard. The eight hour CO concentration ranges from 6.1 to 8.5 ppm, also lower than the 9.0 ppm State and federal standards. Therefore, implementation of the project would not have an adverse impact on local air quality. Because no CO hotspots were identified, no nearby sensitive receptors would be affected by project related local air quality impacts.

Air Quality Management Plan Consistency

Compliance with the provisions of the federal Clean Air Act and California Clean Air Act is the primary focus of the Air Quality Management Plan (AQMP) developed by SCAQMD and SCAG. The Plan is revised every three years, with the latest version adopted by the SCAQMD in November, 1996, and titled the 1997 AQMP. As previously stated, the 1997 AQMP should be used to determine project consistency. According to the 1997 AQMP, attainment of all federal health standards is to occur no later than the year 2000 for carbon monoxide, the year 2006 for PM_{10}, and the year 2010 for ozone. State standards would be attained no later than the year 2000 for carbon monoxide. State standards for ozone and PM_{10} would not be achieved until after the year 2010. Both the federal and State standards for nitrogen dioxide have been met, and the SCAQMD has requested USEPA redesignation of the Basin to "attainment" for this criteria pollutant.

Table 4.8.C - Carbon Monoxide Concentrations (ppm)
Development Option A

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Buena Vista Street/San	20	10.4	7.2
Fernando Boulevard	25	10.0	6.9
	30	9.7	6.7
	35	9.5	6.6
Buena Vista Street/	18	9.4	6.5
Thornton Avenue	23	9.1	6.3
	28	8.9	6.2
	33	8.8	6.1
Buena Vista Street/	18	12.2	8.5
Empire Avenue	23	11.3	7.9
	28	10.8	7.5
	33	10.5	7.3
Buena Vista Street/	15	11.0	7.6
Vanowen Street	20	10.2	7.1
	25	9.8	6.8
	30	9.6	6.7
Buena Vista Street/	20	9.8	6.8
Victory Boulevard	25	9.5	6.6
	30	9.3	6.5
	35	9.2	6.4
Buena Vista Street/	20	9.9	6.9
Burbank Boulevard	25	9.5	6.6
	30	9.3	6.5
	35	9.2	6.4
Buena Vista Street/	20	10.1	7.0
Magnolia Avenue	25	9.7	6.7
	30	9.5	6.6
	35	9.4	6.5

[1] Includes ambient one hour CO concentration of 7.8 ppm for long-range build out year projected at the East San Fernando Valley Station (formerly Burbank Station), as shown in the 1993-1997 AQMD/ARB air quality data publication. The State standard for one hour CO is 20 ppm.

[2] Includes ambient eight hour CO concentration of 5.4 ppm for long-range build out year projected at the East San Fernando Valley Station (formerly Burbank Station). The State standard for eight hour CO is 9.0 ppm.

Table 4.8.C - Carbon Monoxide Concentrations (ppm)
Development Option A (Continued)

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Buena Vista Street/	20	9.9	6.9
Olive Avenue	25	9.6	6.7
	30	9.3	6.5
	35	9.2	6.4
Buena Vista Street/	20	9.9	6.9
Alameda Avenue	25	9.6	6.7
	30	9.4	6.5
	35	9.2	6.4
Hollywood Way/	20	10.2	7.1
Thornton Avenue	25	9.8	6.8
	30	9.5	6.6
	35	9.3	6.5
Hollywood Way/	20	9.5	6.6
Victory Boulevard	25	9.3	6.5
	30	9.1	6.3
	35	9.0	6.2
Hollywood Way/	20	10.1	7.0
Magnolia Avenue	25	9.7	6.7
	30	9.4	6.5
	35	9.3	6.5
Hollywood Way/	20	10.0	6.9
Alameda Avenue	25	9.7	6.7
	30	9.5	6.6
	35	9.3	6.5
Burbank Boulevard/	24	9.8	6.8
San Fernando	29	9.6	6.7
Boulevard	34	9.4	6.5
	39	9.3	6.5

Source: LSA Associates, Inc. 1998.

[1] Includes ambient one hour CO concentration of 7.8 ppm for long-range build out year projected at the East San Fernando Valley Station (formerly Burbank Station), as shown in the 1993-1997 AQMD/ARB air quality data publication. The State standard for one hour CO is 20 ppm.

[2] Includes ambient eight hour CO concentration of 5.4 ppm for long-range build out year projected at the East San Fernando Valley Station (formerly Burbank Station). The State standard for eight hour CO is 9.0 ppm.

The 1997 AQMP includes short-term, intermediate, and long-term control measures, as well as market based incentive strategies, to meet targets for emission reduction. The short-term measures identify specific control measures under existing technology. The control measures consist mainly of stationary source controls that will be the subject of SCAQMD rule making, ARB adopted motor vehicle emissions standards and fuel specifications, and federally adopted programs to reduce emissions from sources under federal jurisdiction. Intermediate term measures are composed primarily of the extension, or more stringent application, of short-term control measures. Long-term measures depend on substantial technological advancements and breakthroughs that are expected to occur throughout the next two decades.

Control measures focus on adoption of new regulations or enhancement of existing regulations for stationary sources, and implementation/facilitation of advanced transportation technologies (i.e., telecommunication, zero emission and alternative fuel vehicles and infrastructure, and both capital and non-capital transportation improvements). Capital based improvements consist of high occupancy vehicle (HOV) lanes, transit improvements, traffic flow improvements, park and ride and intermodal facilities; and urban freeway, bicycle and pedestrian facilities. Non-capital based improvements consist of rideshare matching and CMP based transportation demand management activities.

One type of transportation measure eliminated from the 1997 AQMP was indirect source controls, which would regulate local land use decisions, particularly medium to large-scale developments. This action was subsequently challenged, and the outcome is still pending. These measures were found too expensive to implement to produce cost-effective emissions reductions. Rule 2202, the replacement for Regulation XV - Ridesharing, remains in effect to ensure that emissions reduction levels originally forecast with implementation of Regulation XV and other indirect source control strategies are achieved. This removal reflects a growing understanding that command and control measures tied to local land use decisions do not effectively alter travel behavior.

SCAQMD Rule 2202

The purpose of Rule 2202-On Road Motor Vehicle Mitigation Options is to reduce mobile emissions associated with employee commute trips to comply with federal and State Clean Air Act requirements. As of January 1, 1997, this rule applies to any employer who employs 250 or more employees, and provides a menu of options for reducing employee work trips. Regulated businesses are required to submit an emission reduction program that includes an emission reduction target (ERT) and means for achieving the identified ERT. Mitigation options include scrapping of older vehicles, incorporating clean fuel on/off-road vehicles into the company's vehicle fleet, conducting inspections of employee vehicles to identify gross emitters and facilitate repair of gross emitters, utilizing emission reduction credits from stationary sources, and participating in the Air Quality Investment Program (AQIP), which requires payment of set fees per employee into a fund used to implement mobile source emission reduction programs, approved by the SCAQMD Governing Board. Future businesses with more than 250

employees for any of the development options will be subject to the requirements of SCAQMD Rule 2202.

Proposed Vapor Barriers - Venting of Vapors

In order to assess the potential for residual concentrations of chemicals to pose a potential health impact, an exposure pathway must be complete. An exposure pathway is the mechanism whereby a human receptor may be exposed to residual concentrations of chemicals. The four elements of a complete exposure pathway are: 1) a source of chemical release, such as a spill; 2) a mechanism of release through a transport medium or media, such as migration through soil into ambient air; 3) a point of contact between the potential receptor and the transport medium or media, such as inhalation; and 4) a potential receptor, such as a construction worker or future on-site office worker. If any one of these four elements is missing, the exposure pathway is incomplete. Only complete exposure pathways may result in exposures of residual concentrations of chemicals to humans that may cause an impact to human health.

Vapor barriers are to be placed on top of the locations of soil gas vapor probes SG101 and SG103 (the locations of the greatest detected concentrations of PCE on site during the 1999 soil vapor investigation, described further in Section 4.11) prior to slab on grade or pavement construction. Placement of the vapor barrier on top of SG101 will also encompass SG42 (the location that had detected concentrations of PCE that had not yet reached equilibrium during the 1999 soil vapor investigation). Please see Section 4.11 of this EIR for a detailed description of the barriers proposed by the developer as part of the project (as described in the Soil Vapor Mitigation at Zelman/Lockheed-Martin Project memo [Sepich December 9, 1999] and in Addendum #1: Soil Vapor Mitigation at Zelman/Lockheed-Martin Project memo [Sepich December 20, 1999]).

The health risk concern would be for on-site occupants that might be exposed to concentrations of volatile compounds migrating to the ground surface. The proposed vapor barrier systems, to be made of high density polyethylene with four inch thick sand beds and associated vent piping for possible venting aboveground via stand pipes (allowing air mixing, treatment, and/or air dispersion to dissipate all vapors), are designed to eliminate the exposure pathway for volatile compounds, including PCE, to be transported to future site occupants, regardless of future concentrations of volatile compounds in soil at these locations.

Significant Impacts

Short-Term Construction Related Impacts

Site grading and building construction will result in short-term emissions of air pollutants, including construction equipment (diesel and gasoline) exhaust emissions, fugitive dust, contaminants in fugitive dust, and architectural coatings.

Construction Equipment Exhaust Emissions

Construction activities would cause combustion emissions from utility engines, on-site heavy-duty diesel and gasoline construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Exhaust emissions during the construction activities envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions. Based on the methodology outlined in the SCAQMD *CEQA Air Quality Handbook*, and construction equipment use information provided for Phase I (peak) construction period, construction emissions associated with Development Option A during a peak day have been estimated and are shown in Table 4.8.D.

As shown, estimated construction equipment emissions exceed the SCAQMD daily thresholds for the criteria pollutants of NO_x and ROC. Emissions of other criteria pollutants would be below the standards.

Diesel emissions associated with construction equipment would result in potential odor in the project vicinity under the worst case scenario of strong wind (greater than 15 mph) blowing from active construction areas to adjacent residential areas. However, if this occurs, the wind would quickly disperse the odor. In addition, if wind speed exceeds 25 miles per hour (mph), grading and other earth moving activities would be required to stop work to avoid dust emissions (please see discussion below and mitigation required to limit dust when wind exceeds 25 mph). Therefore, no significant odor or equipment exhaust air impacts would occur as a result of the project construction.

Fugitive Dust

Fugitive dust emissions are generally associated with demolition, land clearing, exposure, overexcavation, and cut and fill operations. Dust generated during construction activities would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors (defined as residents of nearby homes and schools) and workers may be exposed to blowing dust, depending upon prevailing wind conditions. The project is expected to overexcavate, replace, and recompact approximately 561,000 cubic yards of soil for the entire site (Zelman Retail Partners, Inc., July 7, 1999). During the recompaction process, it is estimated that a 20 percent "shrinkage" will be encountered, which will necessitate the import of approximately 112,000 cubic yards of soils to compensate for shrinkage. An additional 120,000 cubic yards will need to be imported due to on-site grade changes. Emissions associated with truck transport have been evaluated previously. This subsection focuses on the fugitive dust emissions generated by on-site activities.

Table 4.8.D - Daily Construction Trucks and Equipment Exhaust Emissions

Number and Equipment Type[2]	No. of Hours in Operation	Pollutants (Lbs/day)[1]				
		CO	**ROC**	**NO_x**	**SO_x**	**PM_{10}**
2 - Water Trucks	9	53.1	8.3	43.2	3.3	3.3
2 - Blade	8	9.9	3.7	26.1	2.5	1.2
15 - Scrapers	8	318.0	28.9	549.3	57.8	43.4
2 - Medium Duty Trucks[3]	8	0.3	0.1	0.1	0.0	0.0
2 - Wheeled Dozers	8	29.6	5.4	61.9	5.4	1.3
30 - Heavy Duty Trucks[4]	8	131.7	36.8	194.3	7.3	48.2
10 - Miscellaneous	8	6.8	1.5	17.0	1.4	1.4
TOTAL		**549.4**	**84.7**	**891.9**	**77.7**	**98.8**
Threshold		**550**	**75**	**100**	**150**	**150**

Source: LSA Associates, Inc., 1999.

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1 Totals are rounded.

2 Emission factors provided by SCAQMD, *199*3 *CEQA Air Quality Handbook*, Table A9-8-A.

3 Employee travel on site; 10 trips per day, 1.5 miles each trip assumed.

4 Import soil to fill the need due to compaction of on-site soil and grade changes; each truck makes 5 trips per day; 50 miles each trip assumed.

5 Support equipment including skip loaders, front-end loaders, and others required during grading or trenching periods.

The SCAQMD estimates that each acre of graded surface creates about 26.4 pounds of PM_{10} per workday, during the construction phase of the project, and 21.8 pounds of PM_{10} per hour from dirt/debris pushing per dozer. The project area covers a total of approximately 103 acres and is expected to be under construction at one time. To estimate potential fugitive dust generation, it is expected that ten acres or less of land would be under construction on any one day, and that two dozers would be used eight hours a day each, together with other equipment, to mass grade the site. Because the site is completely bare of all improvements and consists of exposed soil, disturbance in areas beyond those being graded may be considered reasonable. Based on these factors, a total of 613 lbs. of PM_{10} per day would be generated from soil disturbance without mitigation during the construction phase. This level of dust emission would exceed the SCAQMD threshold of 150 pounds per day. However, the Lockheed Martin Corporation indicates that soil stabilizing compounds have been applied to the site to manage creation of dust, thereby reducing emissions below 613 pounds of PM_{10} per day. The calculation of this reduction is not possible, due to site variables.

Prior to issuance of grading permits, the project applicant is required to include a dust control plan as part of the construction contract standard specifications, per AQMD rules. The dust control plan will specify measures to be implemented during grading activities, consistent with SCAQMD Rules 402 and 403. Rule 402 requires that there be no dust impacts off site sufficient to cause a nuisance, and Rule 403 restricts visible dust emissions from construction. The SCAQMD Rules 402 and 403 fugitive dust control techniques are further summarized below. Implementation of these dust suppression techniques as required by the SCAQMD can reduce the fugitive dust generation (and thus the PM_{10} component) by 50 to 75 percent. Compliance with the following rules (these measures will be noted on the grading plan cover sheet) would reduce impacts on nearby sensitive receptors and reduce PM_{10} in the air basin:

- Portions of the construction site to remain inactive longer than a period of three months shall be seeded and watered until grass cover is grown.

- All active portions of the construction site shall be watered to prevent excessive amounts of dust.

- On-site vehicle speed shall be limited to 15 mph.

- All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized.

- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day.

- All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 mph averaged over one hour) or during Stage 1 or Stage 2 episodes.

- All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.

- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized at all times.

Even with implementation of the requirements of SCAQMD Rules 402 and 403 regarding control of fugitive dust and the soil binder reportedly in place on the site, fugitive dust emissions from construction activities are expected to remain a significant, short-term impact, with PM_{10} levels exceeding 150 pounds a day. Therefore, specific mitigation and monitoring are recommended to control dust (see Mitigation Measures 8.3, 8.4, and 8.5).

Implementation of Mitigation Measures 8.1 and 8.5 and compliance with SCAQMD Rules 402 and 403 will reduce short-term construction emissions resulting from construction equipment, fugitive dust, and architectural coatings; however, the resulting impacts would remain significant, and are considered unavoidable significant impacts.

Architectural Coatings

Architectural coatings contain volatile organic compounds (VOC) that are similar to ROC and are part of the ozone precursors. Because there is insufficient information at this time for the proposed commercial uses, the architectural treatment, and finishes for the structures, the VOC emissions associated with architectural coatings are not calculated. However, because emissions from other construction activities would exceed the construction emission thresholds set by the SCAQMD, and the fact that the Basin is in non-attainment status for four criteria pollutants, emissions associated with architectural coating should be reduced by using precoated/natural colored building materials, using water based or low VOC coating, and using coating transfer or spray equipment with high transfer efficiency. For example, high volume, low pressure (HVLP) spray method is a coating application system operated at air pressure between 0.1 and 10 pounds per square inch gauge (psig) with 65 percent transfer efficiency. Manual coatings application, such as paint brush, hand roller, trowel, spatula, dauber, rag, or sponge, have 100 percent transfer efficiency.

Long-Term Regional Air Quality Impacts

Stationary Sources

Proposed on-site uses under this project alternative include commercial, retail, and office uses. These uses would consume natural gas and electricity and produce air pollutant emissions. On-site uses that could emit air pollutants themselves include boilers, auto repair and painting, gasoline storage and sales, and restaurants using charbroilers. These uses and special equipment utilized in these operations are regulated by AQMD through a permitting process. Air pollutant discharges by paint booths, gas stations, boilers, and charbroilers are regulated to reduce emissions throughout the

Basin. These emissions are nearly impossible to calculate on a project of this size, due to the lack of information about the size, type, and amount of equipment within the project. Therefore, emissions from the project are not calculated. In addition, each of these pieces of equipment within these uses is individually permitted through AQMD, which will limit emissions from the permitted on-site uses. Per calculations based on Table A9-11 and Table A9-12 in SCAQMD CEQA Air Quality Handbook, Development Option A is estimated to generate the criteria pollutant emissions shown in Table 4.8.E.

Table 4.8.E - Emissions by Energy Consumption (lb./day)
Development Option A

Land Use	CO	ROC	NO_x	SO_x	PM_{10}
Development Option A					
Electricity Usage	16.79	0.84	96.55	10.08	3.36
Natural Gas Usage	3.20	0.85	19.18	–*	0.03
Subtotal Emissions	**20.0**	**1.7**	**115.7**	**10.1**	**3.4**
SCAQMD Threshold	**550.0**	**55.0**	**55.0**	**150.0**	**150.0**

* negligible amount

Source: LSA Associates, Inc. 1998.

Table 4.8.E shows that estimated emissions from on-site stationary sources, i.e., energy consumption, would exceed the NO_x emission thresholds established by the SCAQMD. These emissions will be somewhat reduced, although not reduced enough to avoid a significant impact, through application of energy conservation measures required by the State of California. The developer is required to implement the use of energy conservation design and building materials and must demonstrate compliance of building plans with Title 24 of the California Code of Regulations regarding energy conservation standards established by the California Energy Commission. The permit applicant is required to incorporate the following in building plans:

- Trees planted to provide shade and shadow to buildings,
- Solar or low-emission water heaters used with combined space/water heater units,
- Refrigerators with vacuum power insulation,

Even with these potential reductions, the resulting emissions of NO_x exceed the threshold of significance; therefore, the project will create a significant impact to regional air quality.

Mobile Sources

There would be vehicular trips associated with the proposed on-site uses with resulting emissions of air pollutants. As indicated in Section 4.7, Transportation and Circulation, 68,660 trips would be associated with the proposed uses. Based on the latest URBEMIS5 air quality model, the proposed land uses would generate the criteria pollutant emissions summarized in Table 4.8.F.

Table 4.8.F - Regional Mobile Source Emissions (pounds/day)
Development Option A

Land Use	CO[1]	ROC[2]	NO_x	SO_x	PM_{10}
Development Option A	4209.4	315.7	500.6	59.6	88.6
SCAQMD Thresholds	550.0	55.0	55.0	150.0	150.0

Source: LSA Associates, Inc. 1998.

Table 4.8.F shows that estimated emissions from project related mobile sources would exceed the operational thresholds for CO, ROC, and NO_x established by the SCAQMD. Therefore, the project will create a significant impact to air quality.

Total Regional Emissions

Total estimated emissions from long-term project operations are shown in Table 4.8.G. Estimated emission levels of CO, ROC, and NO_x would exceed the SCAQMD threshold for long-term operations. Implementation of the requirements of the City's Transportation Demand Management (TDM) Ordinance (described in Section 4.7, Traffic and Circulation) will provide opportunities to reduce vehicle trips and vehicle miles traveled with resultant improvement in regional air quality. Even with implementation of the TDM ordinance and compliance with SCAQMD Rule 2202, as applicable, remaining pollutant emissions are expected to continue to exceed the criteria and are considered significant air quality impacts.

1 Calculated in winter for worst case scenario.

2 TOG emissions multiplied by a factor of 0.9.

Table 4.8.G - Total Regional Emissions (pounds/day)
Development Option A

Category	CO[1]	ROC[2]	NO_x	SO_x	PM_{10}
Stationary Sources	20.0	1.7	115.7	10.1	3.4
Mobile Sources	4209.4	315.7	500.6	59.6	88.6
Total Emissions	**4229**	**317**	**616**	**70**	**92**
SCAQMD Thresholds	550	55	55	150	150
Significant Impact?	Yes	Yes	Yes	No	No

Source: LSA Associates, Inc. 1998.

Implementation of TDM ordinance and SCAQMD Rule 2202 will reduce long-term regional air quality impacts resulting from stationary sources, on-site sources, and mobile sources; however, total regional emissions remain at a significant level and are considered unavoidable significant impacts. There are no other practical methods of reducing long-term significant regional impacts.

Development Option A will create significant impacts on air quality for CO[1], ROC[2] and NO_x.

4.8.4 MITIGATION MEASURES - DEVELOPMENT OPTION A

8.1 In order to reduce short-term construction impacts from emissions from equipment and vehicles, prior to issuance of grading permits, the permit applicant shall include the following measures on construction plans and in all construction contracts, to the satisfaction of the Director, City of Burbank Community Development Department:

- The Construction Contractor shall select the construction equipment used on site based on low emission factors and high energy efficiency, as reported by the federal government.
- The Construction Contractor shall ensure that construction grading plans include a statement that all construction equipment will be tuned and maintained in accordance with the manufacturer's specifications.
- The Construction Contractor shall time the construction activities so as not to interfere with peak hour traffic and minimize obstruction of through traffic lanes adjacent to the site; if necessary, a flag person shall be retained to maintain safety adjacent to existing roadways.
- The Construction Contractor shall provide ridesharing and transit incentives for the construction crew, such as free bus passes and preferred carpool parking.

8.2 In order to reduce short-term construction emissions, prior to issuance of building permits, the permit applicant shall include low emission architectural coatings measure on construction plans. The Director, City of Burbank Community Development Department, shall verify inclusions of this measure:

- The Construction Contractor shall utilize, to the extent possible, precoated/natural colored building materials, water based or low VOC coating, and coating transfer or spray equipment with high transfer efficiency, such as high volume low pressure (HVLP) spray method, or manual coatings application, such as paint brush, hand roller, trowel, spatula, dauber, rag or sponge.

8.3 In order to reduce fugitive dust from construction activities, the following shall be implemented by the applicant prior to commencement of grading or excavation:

Prior to issuance of grading permits, the applicant shall furnish documentation to the satisfaction of the Director, Community Development Department, that the following provisions are included in the grading contractor's contract:

1. Apply non-toxic chemical soil stabilizers, according to manufacturers' specifications, to all inactive construction areas and previously graded areas inactive for five days or more.

2. Enclose, cover, water twice daily, or apply non-toxic soil binders, according to manufacturers' specifications, to exposed stockpiles (i.e., gravel, sand, dirt) with five percent or greater silt content;

3. Automatic water mist or sprinkler systems should be installed in areas with stockpiles. Adequate amounts of water shall be applied to areas of excavation, trenching, and stockpiles to preclude generation of visible dust plumes.

4. Daily and weekly summary monitoring reports shall be submitted to the Director, Community Development, by the applicant or contractor.

8.4 In order to reduce fugitive dust from on-site and off-site vehicle activity, the following measures shall be implemented by the applicant and the contractor during the period of construction:

The applicant shall furnish documentation to the satisfaction of the Director, Community Development Department, that the following provisions are included in the grading contractor's contract:

1. All trucks hauling, dirt, sand, soil, or other loose materials are to be covered, or shall maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code section 23114

("freeboard" means vertical space between the top of the load and top of the trailer); tightly secured covering to truck.

2. Sweep adjacent streets once a day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water). Sweep streets immediately after period of heaviest vehicular track-out activity.

3. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. Set up truck washing area on paved access road area so subsequent truck travel on unpaved roads can be eliminated.

4. Pave or provide gravel roadbed on all on-site construction access roads at least 100 feet onto the site from main road.

5. Apply water three times daily, or apply non-toxic soil stabilizers, according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.

6. Traffic speeds on all unpaved roads to be reduced to 15 mph or less; effective traffic control or signage shall be installed and maintained.

7. Daily and weekly monitoring reports by the developer's monitor, acceptable to the City of Burbank, shall be submitted to the Director, Community Development, by the applicant or contractor.

8.5 A construction and construction related activity monitor satisfactory to the Director of Community Development shall be retained by the applicant prior to issuance of grading permit. The monitor shall monitor all activity on a daily basis, keep written daily records, and file daily activity reports with the Director, Community Development, for the duration of grading and construction. The monitor shall be employed by the applicant or the applicant's contractor, and shall file reports with the Director, Community Development. The monitor shall report on the following strategies:

- Construction equipment exhaust shall be minimized by use of:
  - NO_x control technologies, such as fuel injection timing retard for diesel engines and air to air after cooling.
  - Low sulfur fuel.
  - Well maintained equipment and proper planning to minimize trips/use.
  - Log fuel use, hours of operation, and periodic maintenance.

- Fugitive dust shall be controlled as specified in Mitigation Measures 8.3 and 8.4, and SCAQMD rules and regulations.

- Restrict delivery of construction supplies and off-site hauling of debris
  - To non-peak travel periods whenever feasible, except for concrete and earthwork related activities.

- Construction worker travel in carpools shall be encouraged by:
  - Common carpool registry, maintained at the construction site and managed by the applicant.

- Application of building materials and architectural coatings shall be controlled by:
  - Applicable SCAQMD rules and Mitigation Measure 8.2.

There are no other practical mitigation measures available to reduce long-term emissions.

4.8.5 CUMULATIVE IMPACTS - DEVELOPMENT OPTION A

Construction Emissions

A number of individual projects in the City of Burbank area may be under construction simultaneously with Development Option A. A list of cumulative projects was developed to determine cumulative impacts. Because projects citywide could contribute to regional air quality impacts, all citywide projects are included. These projects are as follows: 1) AMC Theater complex, 2) Regent Properties, 3) Elks Lodge and office building, 4) M. David Paul development, 5) J. H. Snyder development, 6) Residence Inn, 7) Menasco, 8) Lockheed A-1 North, and 9) the Burbank-Glendale and Pasadena Airport Expansion, listed in more detail in Section 4.5.5.

Depending on construction schedules and actual implementation of projects in the area, generation of fugitive dust and pollutant emissions during construction may result in cumulatively substantial short-term increases in air pollutants. Because proposed Development Option A already exceeds the threshold of significance, any additional grading or substantial construction will add to the already significant impact. Also, as discussed below, the Basin is in non-attainment for PM_{10}. The ambient PM_{10} concentrations plus project related PM_{10} emissions exacerbate basin cumulative impacts. This would be a contribution to short-term cumulative air quality impacts.

Project Emissions

Currently, the Basin is in non-attainment for ozone, carbon monoxide, nitrogen oxides, and PM_{10}. Construction of Development Option A, in conjunction with other planned developments within the cumulative study area and the subregion, would contribute to the existing non-attainment status, without adequate implementation of the 1997 AQMP. The growth assumptions used to determine future baseline conditions in the 1997 AQMP included construction of the proposed site at a lower density (i.e.,

industrial). Implementation of Development Option A, which amends the City General Plan, will result in greater emissions than currently estimated in the AQMP for this site. Any development that results in additional emissions must be offset by control strategies outlined in the 1997 AQMP. Thus, if the control strategies outlined in the 1997 AQMP are not adequately implemented, Development Option A would exacerbate non-attainment of air quality standards within the subregion and Basin and would contribute to adverse cumulative air quality impacts.

4.8.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION - DEVELOPMENT OPTION A

Unavoidable Adverse Project Impacts

Development Option A will result in significant air quality impacts, due to short-term construction emissions from airborne dust from grading and construction activities, and emissions from heavy equipment, long-term mobile emissions from vehicle traffic, and long-term stationary emissions from off-site electrical power generation and on-site natural gas use. Implementation of Mitigation Measures 8.1 through 8.5 have been included to reduce these impacts; however, remaining impacts are significant.

Unavoidable Adverse Cumulative Impacts

Implementation of Development Option A, which amends the City General Plan, will result in greater emissions than currently estimated in the AQMP for this site. Any development that results in additional emissions must be offset by control strategies outlined in the 1997 AQMP. Thus, if the control strategies outlined in the 1997 AQMP are not adequately implemented, Development Option A would exacerbate non-attainment of air quality standards within the subregion and Basin and would contribute to adverse cumulative air quality impacts.

4.8.7 IMPACTS - DEVELOPMENT OPTION D1-A

Less Than Significant Impacts

Long-Term Microscale Projections

Vehicular trips under Development Option D1-A would contribute to congestion at intersections and along roadway segments in the project vicinity. As indicated in the traffic analysis, Development Option D1-A would generate a total of 63,255 vehicular trips from the project site.

Data in Table 4.8.H show that there would be no exceedance of either the State or federal CO standards for the one hour or the eight hour durations. The one hour CO concentration near all six intersections analyzed ranges from 8.2 to 10.2 ppm, much lower than the 20 ppm State standard. The eight hour CO concentration ranges from 5.7 to 7.1 ppm, also lower than the 9.0 ppm State standard. Therefore, implementation

Table 4.8.H - Carbon Monoxide Concentrations, ppm
Development Option D1-A

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Buena Vista Street/	20	8.7	6.0
San Fernando	25	8.5	5.9
Boulevard	30	8.5	5.9
	35	8.4	5.8
Buena Vista Street/	18	8.5	5.9
Thornton Avenue	23	8.3	5.8
	28	8.3	5.8
	33	8.2	5.7
Buena Vista Street/	18	9.5	6.6
Empire Avenue	23	9.2	6.4
	28	9.0	6.2
	33	8.9	6.2
Buena Vista Street/	15	10.2	7.1
Vanowen Street	20	9.6	6.7
	25	9.3	6.5
	30	9.1	6.3
Buena Vista Street/	20	8.6	6.0
Victory Boulevard	25	8.5	5.9
	30	8.4	5.8
	35	8.4	5.8
Buena Vista Street/	20	8.5	5.9
Burbank Boulevard	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Buena Vista Street/	20	8.6	6.0
Magnolia Avenue	25	8.5	5.9
	30	8.4	5.8
	35	8.3	5.8

[1] Includes ambient one hour CO concentration of 7.8 ppm for long-range build out year, projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for one hour CO is 20 ppm.

[2] Includes ambient eight hour CO concentration of 5.4 ppm for long-range build out year, projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for eight hour CO is 9.0 ppm.

Table 4.8.H - Carbon Monoxide Concentrations, ppm
Development Option D1-A (Continued)

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Buena Vista Street/	20	8.5	5.9
Olive Avenue	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Buena Vista Street/	20	8.5	5.9
Alameda Avenue	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Hollywood Way/	20	9.1	6.3
Thornton Avenue	25	8.9	6.2
	30	8.7	6.0
	35	8.6	6.0
Hollywood Way/	20	8.4	5.8
Victory Boulevard	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Hollywood Way/	20	8.6	6.0
Magnolia Avenue	25	8.5	5.9
	30	8.4	5.8
	35	8.3	5.8
Hollywood Way/	20	8.4	5.8
Alameda Avenue	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Burbank Boulevard/	24	8.5	5.9
San Fernando	29	8.4	5.8
Boulevard	34	8.4	5.8
	39	8.3	5.8

Source: LSA Associates, Inc. 1998.

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[1] Includes ambient one hour CO concentration of 7.8 ppm for long-range build out year, projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for one hour CO is 20 ppm.

[2] Includes ambient eight hour CO concentration of 5.4 ppm for long-range build out year, projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for eight hour CO is 9.0 ppm.

the reductions are not sufficient to reduce impacts to less than significant levels. Therefore, because the area to be graded and the construction activities are relatively the same as Development Option A, similar to Development Option A, construction emissions impacts are significant/unavoidable for Development Option D1-A.

Long-Term Regional Air Quality Impacts

Stationary Sources/On-Site Sources

Proposed on-site uses under Development Option D1-A include 255,000 SF auto sale, 538,500 SF retail uses, 600,000 SF office uses, 91,500 SF of fast food/restaurant uses, and 350 room hotel uses. These land uses would consume natural gas and electricity, thus producing air pollutant emissions. Based on Table A9-11, Emissions from Electricity Consumption by Land Uses, and Table A9-12, Estimating Emissions from Natural Gas Consumption, in SCAQMD CEQA Air Quality Handbook, the proposed project would generate criteria pollutant emissions, as shown in Table 4.8.I.

Table 4.8.I- Emissions by Energy Consumption (pound/day)
Development Option D1-A

Land Use	CO	ROC	NO_x	SO_x	PM_{10}
Development Option D1-A					
Electricity Usage	13.07	0.66	75.20	7.85	2.62
Natural Gas Usage	3.03	0.80	18.19	–[1]	0.03
Subtotal Emissions	**16.1**	**1.5**	**93.4**	**7.9**	**2.6**
SCAQMD Threshold	**550.0**	**55.0**	**55.0**	**150.0**	**150.0**

Source: LSA Associates, Inc. 1998.

On-site uses that could emit air pollutants themselves include boilers, auto repair and painting, gasoline storage and sales, and restaurants using charbroilers. These uses and special equipment utilized in these operations are regulated by AQMD through a permitting process. Air pollutant discharges by paint booths, gas stations, boilers, and charbroilers are regulated to reduce emissions throughout the Basin. These emissions are nearly impossible to calculate on a project of this size, due to the lack of information about the size, type, and amount of equipment within the project. Therefore, emissions from the project are not calculated. In addition, each of these pieces of equipment within these uses is individually permitted through AQMD, which will limit emissions from the permitted on-site uses.

As with Development Option A, Development Option D1-A will have a significant impact to regional air quality from NO_x emissions.

[1] Negligible amount.

Mobile Sources

Vehicular trips would be associated with the proposed on-site uses under this alternative. As indicated above, 63,255 trips would be associated with the proposed uses. Based on the latest URBEMIS5 air quality model, the proposed land uses would generate the criteria pollutant emissions summarized in Table 4.8.J.

Table 4.8.J - Total Regional Emissions (pounds/day)
Development Option D1-A

Category	CO[1]	ROC[2]	NO_X	SO_X	PM_{10}
Stationary Sources	1.61	1.5	93.4	7.9	2.6
Mobile Sources	3,809.9	287.4	456.8	54.3	80.8
Total Emissions	**3,826**	**289**	**550**	**62**	**83**
SCAQMD Thresholds	550	55	55	150	150
Significant Impact?	Yes	Yes	Yes	No	No

Source: LSA Associates, Inc. 1998.

As with Development Option A, Development Option D1-A will have a significant impact on regional air quality from CO, ROC, and NO_x emissions.

Total Regional Emissions

Estimated total emissions from long-term project operations are shown in Table 4.8.J. Emission levels of CO, ROC, and NO_x would exceed the SCAQMD threshold for long-term operations.

The level of both short-term and long-term impacts before mitigation is significant. Even with implementation of AQMD Rules 403 and 2202, short-term regional impacts on air quality are significant.

4.8.8 MITIGATION MEASURES - DEVELOPMENT OPTION D1-A

The mitigation measures for Development Option A also apply to Development Option D1-A. As with Option A, the mitigation measures address only short-term construction and grading impacts. There is no feasible and practical mitigation for long-term regional air quality impacts.

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1 Calculated in winter for worst case scenario.

2 TOG emissions multiplied by a factor of 0.9.

4.8.9 CUMULATIVE IMPACTS - DEVELOPMENT OPTION D1-A

Development Option D1-A will have cumulative impacts similar to those of Development Option A. These impacts are considered to be significant.

4.8.10 LEVEL OF SIGNIFICANCE AFTER MITIGATION - DEVELOPMENT OPTION D1-A

Similar to Development Option A, air quality impacts will remain significant under Development Option D1-A after implementation of all mitigation measures.

4.8.11 IMPACTS - DEVELOPMENT OPTION D1-B

Less Than Significant Impacts

Long-Term Microscale Projections

Vehicular trips under Development Option D1-B would contribute to the congestion at intersections and along roadway segments in the project vicinity. As indicated in the traffic analysis, Development Option D1-B would generate a total of 62,578 vehicular trips from the project site.

Data in Table 4.8.K show that there would be no exceedance of either the State or federal CO standards for the one hour or the eight hour durations. The one hour CO concentration near all six intersections analyzed ranges from 8.2 to 9.5 ppm, much lower than the 20 ppm State standard. The eight hour CO concentration would be from 5.7 to 6.6 ppm, also lower than the 9.0 ppm State standard. Therefore, implementation of the project would not have an adverse impact on local air quality. Because no CO hotspots were identified, no nearby sensitive receptors (i.e., nearby residences) would be affected by project related local air quality impacts.

Air Quality Management Plan Consistency/SCAQMD Rule 2202

AQMP consistency analysis for Development Option D1-B has results similar to those of Development Option A. Control measures focus on adoption of new regulations or enhancement of existing regulations for stationary sources, and implementation/ facilitation of advanced transportation technologies (i.e., telecommunication, zero emission, alternative fuel vehicles, infrastructure, and both capital and non-capital based transportation improvements). Similar to Development Option A, Rule 2202 - On Road Motor Vehicle Mitigation Options would apply.

Potentially Significant Impacts

There are no potentially significant impacts.

Table 4.8.K - Carbon Monoxide Concentrations, ppm
Development Option D1-B

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Buena Vista Street/	20	8.7	6.0
San Fernando Boulevard	25	8.6	6.0
	30	8.5	5.9
	35	8.5	5.9
Buena Vista Street/	18	8.5	5.9
Thornton Avenue	23	8.4	5.8
	28	8.3	5.8
	33	8.3	5.8
Buena Vista Street/	18	9.5	6.6
Empire Avenue	23	9.2	6.4
	28	9.1	6.3
	33	8.9	6.2
Buena Vista Street/	15	9.3	6.5
Vanowen Street	20	9.0	6.2
	25	8.8	6.1
	30	8.7	6.0
Buena Vista Street/	20	8.5	5.9
Victory Boulevard	25	8.4	5.8
	30	8.4	5.8
	35	8.3	5.8
Buena Vista Street/	20	8.4	5.8
Burbank Boulevard	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Buena Vista Street/	20	8.5	5.9
Magnolia Avenue	25	8.4	5.8
	30	8.4	5.8
	35	8.3	5.8

[1] Includes ambient one hour CO concentration of 7.8 ppm for long-range build out year projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for one hour CO is 20 ppm.

[2] Includes ambient eight hour CO concentration of 5.4 ppm for long-range build out year project at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for eight hour CO is 9.0 ppm.

Table 4.8.K - Carbon Monoxide Concentrations, ppm
Development Option D1-B (Continued)

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Buena Vista Street/	20	8.4	5.8
Olive Avenue	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Buena Vista Street/	20	8.5	5.9
Alameda Avenue	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Hollywood Way/	20	8.6	6.0
Thornton Avenue	25	8.5	5.9
	30	8.4	5.8
	35	8.3	5.8
Hollywood Way/	20	8.4	5.8
Victory Boulevard	25	8.3	5.8
	30	8.3	5.8
	35	8.2	5.7
Hollywood Way/	20	8.5	5.9
Magnolia Avenue	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Hollywood Way/	20	8.4	5.8
Alameda Avenue	25	8.3	5.8
	30	8.3	5.8
	35	8.2	5.7
Burbank Boulevard/	24	8.6	6.0
San Fernando Boulevard	29	8.5	5.9
	34	8.4	5.8
	39	8.4	5.8

Source: LSA Associates, Inc. 1999.

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[1] Includes ambient one hour CO concentration of 7.8 ppm for long-range build out year projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for one hour CO is 20 ppm.

[2] Includes ambient eight hour CO concentration of 5.4 ppm for long-range build out year project at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for eight hour CO is 9.0 ppm.

Significant Impacts

Short-Term Construction Related Impacts

The short-term construction related impacts under Development Option D1-B are similar to Development Option A. The level of significance before mitigation is significant. Mitigation measures identified in Section 4.8.4 would apply to this development option, as they apply to Development Option A, to reduce impacts. However, the reductions are not sufficient to reduce impacts to less than significant levels. Therefore, because the area to be graded and the construction activities are relatively the same as Development Option A, similar to Development Option A, construction emission impacts are significant/unavoidable for Development Option D1-B.

Long-Term Regional Air Quality Impacts

Stationary Sources/On-Site Sources

Proposed on-site uses under Development Option D1-B include 255,000 SF auto sales, 551,819 SF retail uses, 400,560 SF office/studio uses, 56,500 SF of fast food/ restaurant uses, and 350 room hotel uses. These land uses would consume natural gas and electricity, thus producing air pollutant emissions. On-site uses that could emit air pollutants themselves include boilers, auto repair and painting, gasoline storage and sales, and restaurants using charbroilers. These uses and special equipment utilized in these operations are regulated by AQMD through a permitting process. Air pollutant discharges by paint booths, gas stations, boilers, and charbroilers are regulated to reduce emission throughout the Basin. These emissions are nearly impossible to calculate on a project of this size, due to the lack of information about the size, type, and amount of equipment within the project. Therefore, emissions from the project are not calculated. In addition, each of these pieces of equipment within these uses is individually permitted through AQMD, which will limit emissions from the permitted on-site uses. Based on Table A9-11, Emissions from Electricity Consumption by Land Uses, and Table A9-12, Estimating Emissions from Natural Gas Consumption, in SCAQMD CEQA Air Quality Handbook, the proposed project would generate the criteria pollutant emissions shown in Table 4.8.L.

As with Development Option A, Development Option D1-B will have a significant impact to regional air quality from NO_x emissions.

Mobile Sources

Vehicular trips would be associated with the proposed on-site uses under this alternative. As indicated above, 62,578 trips would be associated with the proposed uses. Based on the latest URBEMIS5 air quality model, the proposed land uses would generate the criteria pollutant emissions summarized in Table 4.8.M.

Table 4.8.L - Emissions by Energy Consumption (pound/day)
Development Option D1-B

Land Use	CO	ROC	NO_x	SO_x	PM_{10}
Development Option D1-B					
Electricity Usage	11.06	0.55	63.61	6.64	2.21
Natural Gas Usage	2.72	0.72	16.32	–[1]	0.03
Subtotal Emissions	**13.8**	**1.3**	**79.9**	**6.6**	**2.2**
SCAQMD Threshold	**550.0**	**55.0**	**55.0**	**150.0**	**150.0**

Source: LSA Associates, Inc. 1999.

Table 4.8.M - Total Regional Emissions (pounds/day)
Development Option D1-B

Category	CO[2]	ROC[3]	NO_x	SO_x	PM_{10}
Stationary Sources	13.8	1.3	79.9	6.6	2.2
Mobile Sources	3,774.5	284.4	451.9	53.7	79.9
Total Emissions	**3,788**	**286**	**532**	**60**	**82**
SCAQMD Thresholds	550	55	55	150	150
Significant Impact?	Yes	Yes	Yes	No	No

Source: LSA Associates, Inc. 1999.

1 Negligible amount.

2 Calculated in winter for worst case scenario.

3 TOG emissions multiplied by a factor of 0.9.

Total Regional Emissions

Estimated total emissions from long-term project operations are shown in Table 4.8.M. Emission levels of CO, ROC, and NO_x would exceed the SCAQMD threshold for long-term operations.

The level of these impacts before mitigation is significant. As with Option A, AQMD rules do not substantially reduce significant impacts from CO, ROC, and NO_x emissions resulting from the project.

4.8.12 MITIGATION MEASURES - DEVELOPMENT OPTION D1-B

The mitigation measures for Development Option A also apply to Development Option D1-B. There are no additional practical mitigation measures that would reduce the project's contribution to regional impacts, which are already noted to be significant. Therefore, there are unavoidable significant impacts that remain after mitigation.

4.8.13 CUMULATIVE IMPACTS - DEVELOPMENT OPTION D1-B

Development Option D1-B will have cumulative impacts similar to those of Development Option A. These impacts are considered to be significant.

4.8.14 LEVEL OF SIGNIFICANCE AFTER MITIGATION - DEVELOPMENT OPTION D1-B

Similar to Development Option A, air quality impacts will remain significant under Development Option D1-B after implementation of all mitigation measures.

4.8.15 IMPACTS - DEVELOPMENT OPTION D1-C

Less than Significant Impacts

Long-Term Microscale Projections

Vehicular trips under Development Option D1-C would contribute to the congestion at intersections and along roadway segments in the project vicinity. As indicated in the traffic analysis, Development Option D1-C would generate a total of 53,452 vehicular trips from the project site.

Data in Table 4.8.N show that there would be no exceedance of either the State or federal CO standards for the one hour or the eight hour durations. The one hour CO concentration at the receptor locations at all 14 intersections analyzed ranges from 8.2 to 10.0 ppm, much lower than the 20 ppm State standard. The eight hour CO concentration result ranges from 5.7 to 6.9 ppm, which is also lower than the 9.0 ppm State

Table 4.8.N - Carbon Monoxide Concentration, ppm
Development Option D1 - C

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Buena Vista Street/San Fernando Boulevard	20	9.5	6.6
	25	9.2	6.4
	30	9.1	6.3
	35	8.9	6.2
Buena Vista Street/Thornton Avenue	18	9.2	6.4
	23	8.9	6.2
	28	8.7	6.0
	33	8.6	6.0
Buena Vista Street/Empire Avenue	18	9.2	6.4
	23	8.9	6.2
	28	8.8	6.1
	33	8.7	6.0
Buena Vista Street/Vanowen Street	15	8.6	6.0
	20	8.4	5.8
	25	8.3	5.8
	30	8.3	5.8
Buena Vista Street/ Victory Boulevard	20	9.5	6.6
	25	9.3	6.5
	30	9.1	6.3
	35	9.0	6.2
Buena Vista Street/Burbank Boulevard	20	8.6	6.0
	25	8.5	5.9
	30	8.4	5.8
	35	8.4	5.8
Buena Vista Street/Magnolia Avenue	20	8.8	6.1
	25	8.7	6.0
	30	8.6	6.0
	35	8.5	5.9
Buena Vista Street/Olive Avenue	20	8.6	6.0
	25	8.5	5.9
	30	8.4	5.8
	35	8.4	5.8
Buena Vista Street/ Alameda Avenue	20	8.4	5.8
	25	8.3	5.8
	30	8.3	5.8
	35	8.2	5.7
Hollywood Way/ Thornton Avenue	20	10.0	6.9
	25	9.6	6.7
	30	9.4	6.5
	35	9.2	6.4

Intersection	Receptor Distance to Roadway Centerline (m)	1 Hour CO Concentration[1]	8 Hour CO Concentration[2]
Hollywood Way/	20	9.5	6.6
Victory Boulevard	25	9.2	6.4
	30	9.1	6.3
	35	9.0	6.2
Hollywood Way/	20	8.5	5.9
Magnolia Avenue	25	8.4	5.8
	30	8.3	5.8
	35	8.3	5.8
Hollywood Way/Alameda	20	8.5	5.9
Avenue	25	8.5	5.9
	30	8.4	5.8
	35	8.3	5.8
Burbank Boulevard/	24	8.4	5.8
San Fernando Boulevard	29	8.3	5.8
	34	8.3	5.8
	39	8.2	5.7

Source: LSA Associates, Inc. 1999.

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[1] Includes ambient one hour CO concentration of 7.8 ppm for long-range build out year, projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for one hour CO is 20 ppm.

[2] Includes ambient eight hour CO concentration of 5.4 ppm for long-range build out year, projected at the East San Fernando Valley Station (formerly the Burbank Station). The State standard for eight hour CO is 9.0 ppm.

standard. Therefore, implementation of this project alternative would not have an adverse impact on local air quality. Because no CO hotspots were identified, no nearby sensitive receptors (i.e., nearby residences) would be affected by project related local air quality impacts.

Air Quality Management Plan Consistency/SCAQMD Rule 2202

AQMP consistency analysis for Development Option D1-C has results similar to those of Development Option A. Control measures focus on adoption of new regulations or enhancement of existing regulations for stationary sources, implementation/facilitation of advanced transportation technologies (i.e., telecommunication, zero emission, alternative fuel vehicles, infrastructure, and both capital and non-capital based transportation improvements). Similar to Development Option A, Rule 2202 - On Road Motor Vehicle Mitigation Options would apply.

Potentially Significant Impacts

There are no potentially significant impacts.

Significant Impacts

Short-Term Construction Related Impacts

The short-term construction related impacts under Development Option D1-C are similar to Development Option A. The level of significance before mitigation is significant. Mitigation measures identified in Section 4.8.4 would apply to this development option, as they apply to Development Option A, to reduce impacts. However, the reductions are not sufficient to reduce impacts to less than significant levels. Therefore, because the area to be graded and the construction activities are relatively the same as Development Option A, similar to Development Option A, construction emission impacts are significant/unavoidable for Development Option D1-C.

Long-Term Regional Air Quality Impacts

Stationary Sources/On-Site Sources

Proposed on-site uses under Development Option D1-C include 86,100 SF auto sales, 714,915 SF retail uses, 570,000 SF office uses, 70,467 SF of fast food/restaurant uses, and 350 room hotel uses. These land uses would consume natural gas and electricity, thus producing air pollutant emissions. On-site uses that could emit air pollutants themselves include boilers, auto repair and painting, gasoline storage and sales, and restaurants using charbroilers. These uses and special equipment utilized in these operations are regulated by AQMD through a permitting process. Air pollutant

discharges by paint booths, gas stations, boilers, and charbroilers are regulated to reduce emission throughout the Basin. These emissions are nearly impossible to calculate on a project of this size, due to the lack of information about the size, type, and amount of equipment within the project. Therefore, emissions from the project are not calculated. In addition, each of these pieces of equipment within these uses is individually permitted through AQMD, which will limit emissions from the permitted on-site uses. Based on Table A9-11, Emissions from Electricity Consumption by Land Uses, and Table A9-12, Estimating Emissions from Natural Gas Consumption, in SCAQMD CEQA Air Quality Handbook, the proposed project would generate the criteria pollutant emissions shown in Table 4.8.O.

Table 4.8.O - Emissions by Energy Consumption (pound/day)
Development Option D1-C

Land Use	CO	ROC	NO_x	SO_x	PM_{10}
Development Option D1-C					
Electricity Usage	12.75	2.64	73.33	7.65	2.55
Natural Gas Usage	3.00	0.79	17.99	–[1]	0.03
Subtotal Emissions	**15.75**	**3.43**	**91.32**	**7.65**	**2.58**
SCAQMD Threshold	**550.0**	**55.0**	**55.0**	**150.0**	**150.0**

Source: LSA Associates, Inc. 1999.

As with Development Option A, Development Option D1-C will have a significant impact to regional air quality from NO_x emissions.

Mobile Sources

Vehicular trips would be associated with the proposed on-site uses under this alternative. As indicated above, 53,452 trips would be associated with the proposed uses. Based on the latest URBEMIS5 air quality model, the proposed land uses would generate criteria pollutant emissions, as summarized in Table 4.8.P.

Total Regional Emissions

Estimated total emissions from long-term project operations are shown in Table 4.8.P. Emission levels of CO, ROC, and NO_x would exceed the SCAQMD threshold for long-term operations.

[1] Negligible amount.

Table 4.8.P - Total Regional Emissions (pounds/day)
Development Option D1-C

Category	CO	ROC[1]	NO_x	SO_x	PM_{10}
Stationary Sources	15	1	91	8	3
Mobile Sources	2,357	244	387	46	68
Total Emissions	**2,372**	**245**	**478**	**54**	**71**
SCAQMD Thresholds	550	55	55	150	150
Significant Impact?	Yes	Yes	Yes	No	No

Source: LSA Associates, Inc. 1999.

The level of these impacts before mitigation is significant. As with Option A, AQMD rules do not substantially reduce significant impacts from CO, ROC, and NO_x emissions resulting from the project.

4.8.16 MITIGATION MEASURES - DEVELOPMENT OPTION D1-C

The mitigation measures for Development Option A also apply to Development Option D1-C. There are no additional practical mitigation measures that would reduce the project's contribution to regional impacts, which are already noted to be significant. Therefore, there are unavoidable significant impacts that remain after mitigation.

4.8.17 CUMULATIVE IMPACTS - DEVELOPMENT OPTION D1-C

Development Option D1-C will have cumulative impacts similar to those of Development Option A. These impacts are considered to be significant.

4.8.18 LEVEL OF SIGNIFICANCE AFTER MITIGATION - DEVELOPMENT OPTION D1-C

Similar to Development Option A, air quality impacts will remain significant under Development Option D1-C after implementation of all mitigation measures.

[1] TOG emissions multiplied by a factor of 0.9.